

## **I/WE CLAIM**

1. A vending machine comprising:  
a cabinet frame including top, bottom, rear and opposing side walls  
that collectively define a central cavity;  
a plurality of column walls defining a plurality of stack areas for  
receiving and storing product containers;  
a door pivotally mounted to the cabinet frame, said door being  
adapted to selectively close the central cavity; and  
a front gate assembly pivotally mounted relative to the column  
walls, said front gate assembly including a plurality of retainer elements  
operatively connected to the column walls through a plurality of hinge  
units, said hinge units establishing a swing radius enabling the plurality of  
retainer elements to travel along an arcuate path from a first, product  
retention position to a second, product loading position wherein, in said  
first position, the plurality of retainer elements extend longitudinally  
between respective ones of said plurality of column walls to retain  
product containers in the stack areas and, in said second position, said  
plurality of retainer elements are generally aligned with respective ones  
of the column walls thereby enabling product containers to be readily  
loaded into the plurality of stack areas.
2. The vending machine according to claim 1, further comprising:  
means for automatically shifting the front gate assembly from the second  
position to the first position.
3. The vending machine according to claim 2, wherein said shifting  
means is constituted by at least one cam surface provided along at least

one of the plurality of hinge units, said at least one cam surface being adapted to be engaged upon closing of the door.

4. The vending machine according to claim 2, wherein said shifting means is constituted by a gate pusher member secured to the door, said gate pusher member being adapted to engage the front gate assembly upon closing of the door.
5. The vending machine according to claim 1, wherein said front gate assembly includes means for automatically positioning a product container in the stack area.
6. The vending machine according to claim 5, wherein the positioning means is constituted by portions of the plurality of retainer elements traveling along the arcuate path.
7. The vending machine according to claim 1, wherein the front gate assembly includes first and second cross bars, said first and second cross bars extending across and interconnecting the plurality of column walls.
8. The vending machine according to claim 1, further comprising: first and second cross braces extending across and interconnecting the plurality of column walls, said plurality of retainer elements being pivotally secured to the first and second cross braces through the plurality of hinge units.

9. The vending machine according to claim 8, wherein said plurality of hinge units include at least two hinge members pivotally attached to each of the first and second cross braces.
10. The vending machine according to claim 8, wherein each of the first and second cross braces includes at least one slot, wherein a respective one of the plurality of hinge units partially extends into the at least one slot.
11. The vending machine according to claim 8, wherein each of the plurality of retainer elements includes first and second U-shaped bend portions at the first and second cross braces
12. The vending machine according to claim 11, wherein said first and second U-shaped bend portions recess a majority of each of the plurality of retainer elements within respective ones of the plurality of stack areas when the front gate assembly is in the second position.
13. The vending machine according to claim 1, wherein the plurality of retainer elements are formed from wire.
14. A method of loading product containers into a plurality of stack areas defined by laterally spaced column walls arranged within a vending machine comprising:
  - opening a door to provide access to the plurality of stack areas;
  - pivoting a front gate assembly having a plurality of retainer elements from a first position, wherein the plurality of retainer elements extend between respective ones of the plurality of stack areas, to a second

position, wherein the plurality of retainer elements are generally aligned with respective ones of the column walls, said plurality of retainer elements traveling along an arcuate path established by a plurality of hinge units when traveling from the first position to the second position; loading product containers into the stack areas; and pivoting the front gate assembly from the second position to the first position.

15. The method of claim 14, further comprising: engaging the front gate assembly upon closing of the door to automatically pivot the plurality of retainer elements from the second position to the first position.

16. The method of claim 15, wherein pivoting the front gate assembly from the second position to the first position includes abutting a cam member provided on at least one of the plurality of hinge units with an inner surface of the door.

17. The method of claim 15, wherein pivoting the front gate assembly from the second position to the first position includes abutting the front gate assembly with a gate member provided on an inner surface of the door.

18. The method of claim 14, wherein pivoting the front gate assembly includes manually moving the plurality of retainer elements.

19. The method of claim 14, further comprising: automatically repositioning product containers in respective ones of the plurality of

stack areas upon pivoting of the front gate assembly from the second position to the first position.